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THOMAS G. ZIMMERMAN, et al.

means for detecting flexure of fingers of the user's hand, and position sensing means coupled to the glove means for detecting a position of the hand with respect to the display means;

interface means for coupling the glove means to the computer; and

control means for controlling a cursor indicated on the display means [in real time] in response to and emulating the flexure of fingers and the position of the hand[.], the cursor being capable of interactively acting upon a virtual object represented within the computer to allow communication and interaction between the user and the program.

8. (Twice Amended) Apparatus as in Claim 1 wherein the display means includes means for displaying the cursor as a representation of a hand which mirrors the position and flexure of fingers in the user's hand.

13. (Twice Amended) An apparatus for controlling a computer display of the type having a virtual object depicted thereon that is used for communicating and interacting with a computer program comprising:

flex sensing means disposed in close proximity to a part of the body of the user, for sensing flexure of the associated part of the body of the user; and

cursor display means, coupled to the flex sensing means and to the computer display, for displaying a cursor [depicting]

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E3
encl.

emulating the flexure of the part of the body [in real time] ,
the cursor being capable of interactively acting upon the virtual
object to allow communication and interaction between the user
and the computer program.

26
~~24.~~ (Twice Amended) An apparatus for interacting with a
virtual object represented within a computer, the virtual object
being used for communicating and interacting with a computer
program, comprising:

position sensing means, disposed in close proximity to
a part of a body of a user for movement therewith, for sensing
the position of the associated part of the body of the user with
respect to the computer;

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flex sensing means, disposed in close proximity to a
part of the user's body for movement therewith, for sensing
flexure of the associated part of the user's body;

interface means for coupling the position sensing means
and the flex sensing means to the computer and for controlling
movement of a cursor represented within the computer [in real
time] in response to the position sensing means and the flex
sensing means, the cursor emulating the position and flexure of
the part of the user's body for interactively acting upon the
virtual object to allow communication and interaction between the
user and the program; and

wherein the computer includes contact detecting means
for detecting contact between the cursor and the virtual object.

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Please cancel Claim 26 and 27.

Please amend Claims 28, 30, 32, 33, 46, and 50 as follows:

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~~27~~
28. (Amended) The apparatus according to the Claim [27]

wherein the part of the user's body is a hand.

E6
30. (Twice Amended) The apparatus according to Claim 29 wherein the interface means [depicts] represents within the computer a virtual hand which mirrors the position and flexure of the fingers of the user's hand.

E7
32. (Twice Amended) The apparatus according to Claim 31 wherein the flex sensing means detects the degree of flexure of the fingers of the user's hand, and wherein the interface means [depicts] represents within the computer the degree of flexure of the fingers of the user's hand.

~~46~~
46. (Twice Amended) An apparatus for controlling a computer display of the type having a virtual object depicted thereon that is used for communicating and interacting with a computer program comprising:

orientation sensing means, disposed in close proximity to a part of a body of a user, for sensing the orientation of the

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associated part of the body of the user with respect to the display; and

cursor display means, coupled to the orientation sensing means and to the computer display, for displaying a cursor [depicting] emulating the orientation of the part of the user's body, [in real time] the cursor being capable of interactively acting upon the virtual object to allow communication and interaction between the user and the computer program.

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Amend.

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~~48.~~ (Amended) The apparatus according to Claim ⁵⁸~~48~~ [wherein the computer display displays a virtual object which may be manipulated by the cursor, and] wherein the cursor display means further comprises contact detecting means for detecting when the virtual object is grasped by the virtual hand.

E9

⁴²
~~50.~~ (Amended) The apparatus according to Claim ²⁶~~24~~ wherein the flex sensing means senses the degree of flexure of the part of the user's body and provides and analog signal to the interface means that indicates the degree of flexure of the part of the body;

and wherein the interface means depicts the flexure of the part of the body based on the intensity of the analog signal.

Claim 52, line 1, change "27" to --28--.

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Please add the following new Claims 62-68.

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~~62~~. The apparatus according to claim ³⁴~~35~~, wherein the interface means causes the virtual object to be manipulated according to commands represented by the position and flexure of the fingers of the user's hand.

³⁶
~~63~~. The apparatus according to claim ³⁵~~62~~ wherein the interface means causes an effect of the manipulation of the virtual object to be substantially the same as if a real object depicted by the virtual object were being manipulated in the same way by the user's hand.

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~~64~~. The apparatus according to claim ³⁶~~63~~ wherein the user's hand does not act upon a real object depicted by the virtual object.

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~~65~~. The apparatus according to claim ³⁶~~64~~ wherein the interface means causes the virtual object to be coupled to the virtual hand and to move together with the virtual hand when the virtual object is grasped by the virtual hand.

³⁹
~~66~~. The apparatus according to claim ³⁸~~65~~ wherein the interface means further comprises linkage means for linking action of the virtual object to a second virtual object.